PELLAGRA IN AN HIV-INFECTED INDIVIDUAL: A CAUSE OF CHRONIC DIARRHOEA

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Introduction

In an acquired immunodeficiency syndrome (AIDS) endemic region, chronic diarrhoea generally arouses suspicion for AIDS. Fever, anorexia and weight loss are the other AIDS-related illnesses which are eventually stalked by opportunistic infections. Chronic diarrhoea is often presumed to be because of the AIDS related pathogens, namely cryptosporidiosis or *Isospora belli* [1], overlooking other possible causes. Diarrhoea is one of the main causes for the weight loss such individuals suffer from, attributing to the genesis of the 'slim disease' [2]. This in turn tends to exaggerate the immune deficiency, forcing the patient on an accelerated down hill course [3].

We report a case of chronic diarrhoea secondary to pellagra in an immuno-deficient patient, who responded to the specific therapy.

Case Report

A 26-year-old African male sought medical attention for diarrhoea of 6 months duration. He was passing 3-4 loose stools daily, unaccompanied with either blood or mucous. Stools were neither foul smelling nor floating in pan. There had been no vomiting, abdominal cramps or fever. He had anorexia and lost more than 4 kg body weight during this illness. He had no other systemic complaints. Patient stated having multiple sexual partners. By food habits he was a non-vegetarian. Maize was his staple diet. For almost 7 years he had been consuming over 20 beer cans during the weekends regularly, but claimed having discontinued alcohol 4 months ago. He had received empirical courses of antibiotics, to no avail and had stopped all the drugs for the last 2 weeks.

Examination revealed a malnourished individual. Blood pressure was 112/68 mm Hg and pulse 78/min. Diffuse hyperpigmentation of the skin over the arms and neck was evident, which was bilaterally symmetrical. These sites were covered by thin varnish like scales. Patchy eczematoid involvement of dor-

sum of hands was also noticed. Glossitis was detected. A few discrete cervical nodes (< 2 cm) were present bilaterally. Abdominal examination revealed hepatomegaly of 1.5 cm. Spleen was not palpable. Bowels were neither tender nor thickened. No other mass was palpable. External genitalia revealed presence of genital warts. No neurological abnormality was detected. Other systemic examination was essentially normal.

Routine examination of stool showed no evidence of blood, mucous or intestinal parasites. Isolation of pathogens by stool culture was negative. Full blood count exhibited leucopenia with slight anaemia. (WBC=3.5 x 10⁹/L; Ly=42.1 x 10⁹/L; Mo=8.6 x 10⁹/L; Gr=49.3 x 10⁹/L; Eo=<.7 x 10⁹/L; Ba=<.2 x 10⁹/L. RBC=4.28 x 10¹²; Hb=12.9 g/dL; HCT=38.3%; MCV=89.6 fL; MCH=30.1 pg; MCHC=33.6 g/L. Plt=152 fL). ESR was 14 mm in the first hour. ELISA detected HIV presence and this was confirmed by Western blot test. CD4/CD8 count was not done due to lack of facilities. Serum electrolytes were evaluated (Na 148 mmol/L; K 4.5 mmol/L; Cl 105 mmol/L). Other investigations were blood urea 3.68 mmol/L; total protein 76.8 g/L; albumin 47.5 g/L; calcium 2.22 mmol/L and magnesium 0.582 mmol/L. Urine examination was normal and aminoaciduria was excluded.

A clinical diagnosis of pellagra was made, which was supplemented by the therapeutic response. The patient was administered a course of nicotinic acid (50 mg TDS orally for 14 days), supplemented by other vitamins and iron. Balanced diet was initiated and he was counselled of its benefits. He was also advised to refrain from consuming alcohol. The patient had a dramatic response to this therapy and diarrhoea stopped on the third day. He gained 1.5 kg body weight within 10 days. Effects of the therapy were also visible on the skin discoloration and eczematoid lesions, which vanished gradually during this period. For the next 6 months the patient remained under constant vigil, but never had any recurrence.

Discussion

The WHO has indicated that there will be approximately 5 million AIDS cases in the coming decade. This pandemic in the Africa continent portends a serious problem, where besides the overwhelming numbers affected, the disease behaves

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differently. Moreover malnutrition which remains the commonest etiological factor for immunosuppression is rife in sub-saharan Africa [4].

Chronic diarrhoea may represent a premonitory sign of HIV progression. A large number of other microorganisms are implicated for such diarrhoea [5]. HIV itself could give rise to GI symptoms. However, a prolonged diarrhoea associated with dermatitis in an alcoholic from southern African region, where the staple diet consists of maize and millet, pellagra must also be considered. Our patient had been confirmed for HIV infection and was undergoing empirical antibiotic therapy for this problem of diarrhoea, with no relief. Probably consideration of the AIDS specific pathogens related to chronic diarrhoea would have been the foremost in the differential diagnosis while managing this patient.

As with the results of another study in Africa, where stool examination was negative in all but one patient [2], our patient also had no abnormality detected in the stool examination. Pellagra, caused by the deficiency of niacin, is manifested by the classical triad of diarrhoea, dementia and dermatitis [6]. We could detect only diarrhoea and dermatitis since the patient came in the early phase

of the disease before dementia could manifest. Following a therapeutic trial of nicotinic acid, the symptoms subsided dramatically. Hartnup disease, which could mimic pellagra, was ruled out by the absence of aminoaciduria [6]. Since no biochemical test is diagnostic for pellagra, diagnosis therefore must be based upon suspicion and the response to replacement therapy [6].

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